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## New species of the genus *Fortagonum* Darlington from western New Guinea

(Insecta, Coleoptera, Carabidae, Agoninae)

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Four new species of the genus *Fortagonum* Darlington from western central Irian Jaya, western New Guinea, are described: *F. spinipenne*, spec. nov., *F. sinak*, spec. nov., *F. laevigatum*, spec. nov., and *F. globulipenne*, spec. nov. An updated key to the New Guinean species of *Fortagonum* (sensu Baehr 1995) is presented.

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### Introduction

Within a sample of carabid beetles collected by A. Riedel during a recent trip to central Irian Jaya, four new species of the genus *Fortagonum* s. str. were discovered that are described below. Altogether, the genus *Fortagonum* (sensu Baehr 1995) now comprises 22 species, though most probably this is by far not the full number of actually existing species, because most species, even those that are still fully winged, seem to occupy very restricted ranges. Better exploration of the various mountain ranges of New Guinea certainly will result in the discovery of additional species.

For recognition of the new species, the key in my most recent paper (Baehr 1995) is updated and fully repeated below, since I believe this procedure would be more convenient for the user than giving notes for recognition under each of the newly described species.

Measurements and discriminating characters are essentially the same as in previous papers (Baehr 1992, 1995).

The holotypes of the new species are presented to the Zoologische Staatssammlung, München, though are kept as permanent loan in the collection of author (ZSM-CBM).

### Updated key to the species of the genus *Fortagonum* Darlington (sensu Baehr 1995)

- |   |                        |
|---|------------------------|
| 1. Wings present .....  | 2.                     |
| – Wings absent .....  | 8.                     |
| 2. Both pairs of supraocular setae absent .....   | 3.                     |
| – At least posterior supraocular seta present .....   | 4.                     |
| 3. Elytra bisetose, elongate, >1.6× as long as wide, only 1/3 wider than pronotum, striae slightly crenulate, intervals depressed. Vogelkop, extreme western Irian Jaya ..... | <i>depressum</i> Baehr |

- Elytra unisetose, shorter, c.  $\frac{1}{3}$  longer than wide, c.  $1.5\times$  as wide as pronotum, striae not crenulate, intervals slightly convex. Western part of central Irian Jaya ..... *sinak*, spec. nov.
4. Both supraorbital setae present. Eastern Irian Jaya ..... *bisetosiceps* Baehr  
 – Anterior supraorbital seta absent ..... 5.
5. Elytra unisetose (only median seta present); prothorax little wider than long. Central eastern Irian Jaya ..... *denticulatum* Baehr  
 – Elytra bisetose (median and posterior setae present); prothorax considerably wider than long. Distribution different ..... 6.
6. Elytra narrow and elongate, with very elongate sutural spines (Fig. 1). Western central Irian Jaya ..... *spinipenne*, spec. nov.  
 – Elytra wider and shorter, with short sutural spines (see figs 47, 48 in Darlington 1971). Distribution different ..... 7.
7. Pronotum wider, sides more straight, anterior angles more protruding. Extreme western Irian Jaya ..... *subconicolle* (Darlington)  
 – Pronotum narrower, sides more convex, anterior angles less protruding. Central Papua New Guinea ..... *bigemum* (Darlington)
8. Both supraocular setae absent ..... 9.  
 – Posterior supraocular seta present ..... 11.
9. Elytral striae superficial, intervals depressed, surface slightly iridescent. Western central Irian Jaya ..... *laevigatum*, spec. nov.  
 – Elytral striae deeply impressed, intervals markedly convex, surface not iridescent ..... 10.
10. Anterior angle of pronotum slightly produced laterally, apex obtuse; elytra longer, ratio  $l/w > 1.32$ . Central Irian Jaya ..... *bufo* Darlington  
 – Anterior angle of pronotum straight, apex acute; elytra shorter, ratio  $l/w < 1.28$ . Western central Irian Jaya ..... *globulipenne*, spec. nov.
11. Elytra usually trisetose, rarely unilaterally unisetose or bisetose; mandibles never straight and very elongate. Central Papua New Guinea ..... 12.  
 – Elytra asetose, or unisetose, or bisetose; either mandibles straight and very elongate, or more or less fusiform species. Central and eastern Irian Jaya ..... 15.
12. Posterior pronotal seta present ..... 13.  
 – Posterior pronotal seta absent ..... 14.
13. Margin of pronotum wide; wide, fusiform species. .... *oodinum* Darlington  
 – Margin of pronotum narrow; rather narrow, barely fusiform species ..... *antecessor* Darlington
14. Pronotum wider, but less conical; elytra weakly iridescent ..... *fortellum* Darlington  
 – Pronotum narrower, but rather conical; elytra markedly iridescent ..... *okapa* Darlington
15. Posterior pronotal seta present; elytra unisetose or bisetose ..... 16.  
 – Posterior pronotal seta absent; elytra asetose ..... 18.
16. Pronotum laterally regularly convex, base as wide as apex, basal angles rounded off, apex very protruding; elytra bisetose, anterior seta absent. Eastern central Irian Jaya ..... *acuticolle* Baehr  
 – Pronotum laterally feebly convex, base much wider than apex, basal angles rectangular and obtuse, apex less protruding; elytra unisetose, only median seta present. Eastern Irian Jaya ..... 17.
17. Apex of elytra not spinose, though sutural angle faintly denticulate, elytra slightly wider; pronotum barely narrowed towards base (Fig. 9). Area east of mountain range to the west of valley of Borne River ..... *unipunctatum* Baehr

- Apex of elytra elongately spinose opposite 3<sup>rd</sup> interval, sutural angle not denticulate, elytra slightly narrower; pronotum distinctly narrowed towards base (Fig. 10). Area west of mountain range to the west of valley of Borme River ..... *spinosum* Baehr
- 18. Mandibles not unusually elongate; apex of elytra distinctly spinose opposite 3<sup>rd</sup> interval; short and wide, markedly fusiform species. Central Irian Jaya ..... *curtum* Baehr
- Mandibles straight and markedly elongate; apex of elytra not spinose; either rather elongate, not markedly fusiform species, or short and wide species with almost parallel lateral borders of pronotum ..... 19.
- 19. Basal margin of elytra not interrupted at 3<sup>rd</sup> interval; prothorax <1.8× as wide as head ..... 20.
- Basal margin of elytra interrupted at 3<sup>rd</sup> interval; prothorax >2× as wide as head ..... 21.
- 20. Rather wide, almost parallel species; pronotum >1.25× as wide as long. Central Irian Jaya .....  
..... *forceps* Darlington
- Narrow, fusiform species with evenly rounded lateral margins of pronotum; pronotum c. 1.1× as wide as long. Central Irian Jaya ..... *formiceps* Darlington
- 21. Pronotum wider at base, ratio width of base/width of apex c. 1.8, sides more curved; elytra rather elongate. Central Irian Jaya ..... *cychriceps* Darlington
- Pronotum narrower at base, ratio width of base/width of apex c. 1.65, sides more parallel; elytra rather short. Central eastern Irian Jaya ..... *latum* Baehr

### *Fortagonum bufo* Darlington

Darlington, 1952: 252, fig. 66; 1971: 317, fig. 70; Baehr 1992: 75.

This highly evolved species was recorded from the Snow Mts., formerly Western New Guinea, now Irian Jaya (Darlington 1952, 1971), and more recently from the Baliem area not far from the type locality (Baehr 1992). Recently it has been recaptured in central Irian Jaya, not far from its recorded range.

**New record.** 1 ♀, IRIAN JAYA, Jayawijaya-Pr., Jiwika, trail to Wandanku, 2240-2420m, 28.IX.1996, leg. A. Riedel (CBM).

### *Fortagonum spinipenne*, spec. nov.

Figs 1, 4

**Types.** Holotype: ♀, Irian Jaya, Panai-Pr. Epomari, km 169, 900-1100 m, 18.1.1996, leg. A. Riedel (ZSM-CBM).

**Diagnosis.** Distinguished by presence of wings, absence of anterior supraocular seta, both pronotal setae, and anterior discal seta, rather narrow, fairly conical pronotum, narrow and elongate elytra, and markedly elongate elytral spine opposite 3<sup>rd</sup> stria.

#### **Description**

Measurements. Length: 10.5 mm; width: 4.5 mm. Ratios. Width/length of pronotum: 1.47; width base/apex of pronotum: 1.60; width pronotum/head: 1.84; width elytra/pronotum: 1.61; length/width of elytra: 1.36.

Wing-and-seta formula: +w -- -- ++.

Colour. Glossy black. Lateral margins of pronotum faintly reddish translucent, labrum, mouth parts, antenna, and tarsi dark reddish-piceous, antenna from 3<sup>rd</sup> antennomere reddish. Lower surface black.

Head. Moderately narrow compared with prothorax. Neck rather wide, somewhat imbedded in prothorax. Eyes fairly large, laterally moderately projecting, orbits distinct, evenly curved. Clypeal suture distinct. Labrum rectangular, apex feebly concave. Mandibles elongate, straight, but not porrect. Antenna very slender and elongate, surpassing base of pronotum by about four antennomeres, median

antennomeres c. 5× as long as wide. Both palpi slender and elongate, basal palpomere of maxillary palpus thickened. Mentum with an elongate, unidentate tooth. No furrow medially of eyes, though a shallow furrow above antennal base present. Only posterior supraocular seta present, at posterior margin of eye. Clypeus and anterior part of frons with short, shallow, parallel furrow on either side, frons evenly convex, absolutely smooth. Microreticulation isodiametric, somewhat superficial. Surface glossy.

Prothorax. Comparatively narrow, somewhat conical, widest in posterior third, laterally evenly though feebly convex, strongly narrowed to apex, moderately narrowed to base. Disk slightly convex, lateral margins widely explanate though barely separated from disk. Anterior angles rather projecting, obtuse at apex. Apex regularly and deeply excised. Basal angles rectangular, at apex obtusely rounded. Base laterally straight, in middle very faintly produced. Disk convex with extremely shallow, v-shaped sulcus in apical fourth, base near basal margin with a rather deep, circular impression on either side and with a very shallow transverse impression. Median line incomplete, very fine, ending far from apex and base. Apex distinctly bordered, lateral margin and base not bordered. Both marginal setae absent. Disk impunctate. Microreticulation very fine, absent on disk, near apex and base highly superficial, isodiametric. Surface glossy.

Elytra. Rather narrow and elongate, dorsal surface markedly convex, lateral borders in middle almost straight. Preapical sinuosity extremely feeble. Widest diameter about in middle. Shoulders wide, obtusely angulate but not dentate, apex spinose with elongate spine opposite 3<sup>rd</sup> interval. Sutural angle with minute denticle. Striae rather shallow, deepened towards apex, minutely punctulate, intervals depressed. Anterior discal seta absent, both median and posterior setae situated at 2<sup>nd</sup> stria. 17 marginal setae and 1 preapical seta at 7<sup>th</sup> stria present, humeral group of marginal series consisting of 6 setae, median and apical pores not much more conspicuous than basal pores, series slightly interrupted in middle. Intervals impunctate. Microreticulation almost wanting. Surface highly glossy, rather iridescent. Wings present.

Lower surface. Prosternal process short, posteriorly slightly convex, triangular, ventrolaterally and posterolaterally bordered. Proepisternum smooth. Mesepisternum coarsely punctate. Metepisternum moderately elongate, c. 1.5× as long as wide at anterior border. Epipleura anteriorly moderately wide, rugose. Abdomen impunctate, though laterally with several fine, elongate wrinkles and shallow impressions. Microreticulation dense, isodiametric, very superficial. ♂ sternum VII unknown, ♀ sternum VII quadrisetose, apex regularly curved.

Legs. Very elongate and slender. 4<sup>th</sup> tarsomere medially faintly excised. 5<sup>th</sup> tarsomere asetose beneath. Vestiture of ♂ anterior tarsus unknown.

♂ genitalia. Unknown.

♀ genitalia. Styломere 2 rather elongate, little curved, with obtuse apex, with 3 fairly small ventral ensiform setae, a dorsal ensiform seta situated about in middle, and one nematiform seta in a deep furrow moderately close to apex. Apex of styломere 1 ventrally with 7-8 setae near base of styломere 2. Lateral plate with 8-9 setae at or near margin.

Variation. Unknown.

**Distribution.** Central Irian Jaya. Known only from type locality.

**Collecting circumstances.** Largely unknown. Presumably collected under log in rain forest of median altitude.

**Etymology.** The name refers to the conspicuously spinose apex of elytra.

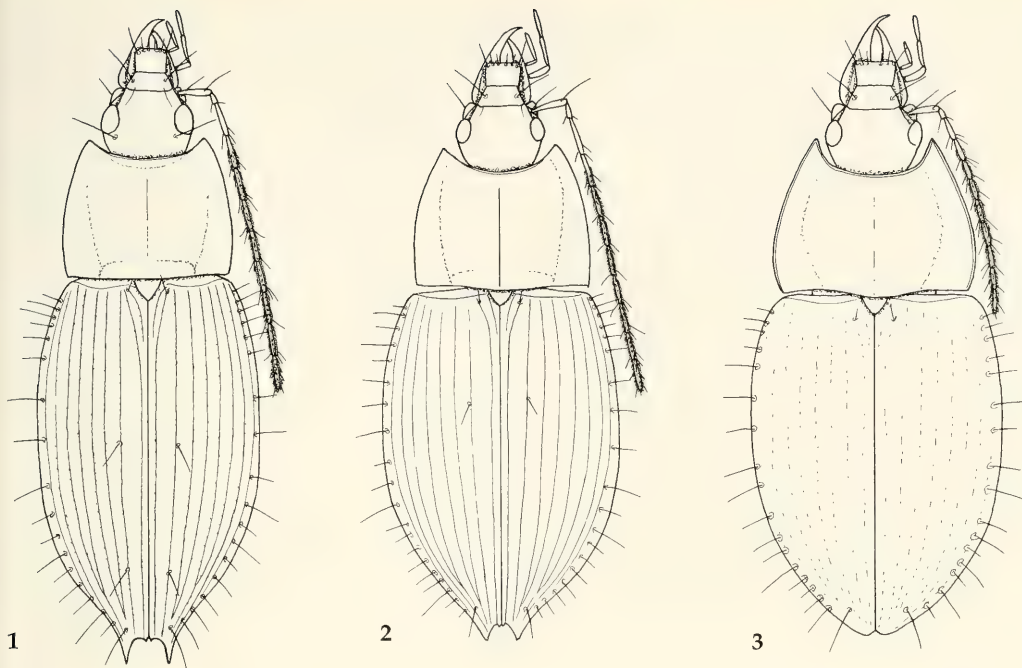
**Relationships.** This species is presumably most closely related to *F. subconicollae* Darlington, though is distinguished by narrower elytra and far longer elytral spines.

*Fortagonum sinak*, spec. nov.

Figs 2, 5

**Types.** Holotype: ♂, IRIAN JAYA, Panai-Pr. Sinak, 2000-2200 m, 14.-17.XII.1995, leg. A. Riedel (ZSM-CBM).

**Diagnosis.** Distinguished by presence of wings, absence of both supraocular setae, both pronotal seta, and anterior and posterior discal setae, moderately wide, conical pronotum with wide marginal



**Figs 1-3.** Habitus. **1.** *Fortagonum spinipenne*, spec. nov. ♀ holotype. **2.** *F. sinak*, spec. nov. ♂ holotype. **3.** *F. laevigatum*, spec. nov. ♀ holotype. Lengths: 10.5 mm; 10.7 mm; 10.1 mm.

channel, moderately elongate, very convex elytra, and short, triangular elytral spine opposite 3<sup>rd</sup> stria.

### Description

**Measurements.** Length: 10.7 mm; width: 4.65 mm. Ratios. Width/length of pronotum: 1.46; width base/apex of pronotum: 1.50; width pronotum/head: 1.83; width elytra/pronotum: 1.52; length/width of elytra: 1.33.

Wing-and-seta formula: +w - - - - + -.

**Colour.** Glossy black. Labrum, mouth parts, antenna, and tarsi dark reddish-piceous, 1st-3<sup>rd</sup> antennomeres infuscate except for base. Lower surface black.

**Head.** Moderately wide compared with prothorax. Neck rather wide, somewhat imbedded in prothorax. Eyes fairly large, laterally moderately projecting, orbits distinct, evenly curved. Clypeal suture distinct. Labrum rectangular, apex feebly concave. Mandibles elongate, straight, but not porrect. Antenna slender and elongate, surpassing base of pronotum by about three antennomeres, median antennomeres c. 4× as long as wide. Both palpi slender and elongate, basal palpomere of maxillary palpus thickened. Mentum with elongate, unidentate tooth. No furrow medially of eyes, though a shallow furrow above antennal base present. Both supraocular setae absent. Clypeus and anterior part of frons with short, shallow, parallel furrow on either side, frons evenly convex, absolutely smooth. Microreticulation isodiametric, somewhat superficial. Surface glossy.

**Prothorax.** Moderately wide, somewhat conical, widest in posterior third, laterally feebly convex, in anterior third even almost straight, fairly narrowed to apex, moderately narrowed to base. Disk rather convex, lateral margins widely explanate, in posterior half weakly separated from disk by a shallow furrow. Anterior angles rather projecting, obtuse at apex. Apex regularly and deeply excised. Basal angles rectangular, at apex obtusely rounded. Base laterally straight, in middle very faintly produced. Disk convex with extremely shallow, v-shaped sulcus in apical fourth, base near basal margin with a rather deep, about circular impression on either side and with an extremely shallow transverse impression. Median line incomplete, very fine, ending far from apex and base. Apex distinctly bordered, lateral margin and base not bordered. Both marginal setae absent. Disk impunc-

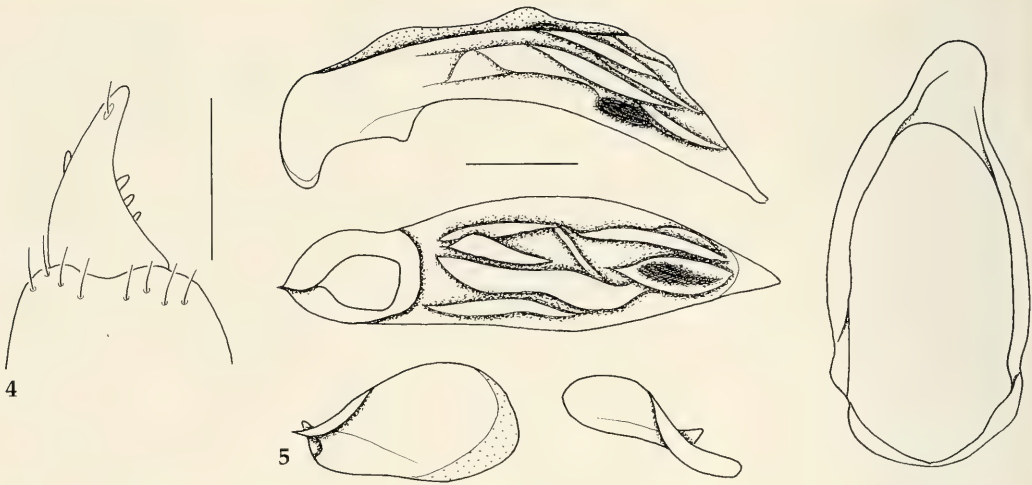


Fig. 4. *Fortagonum spinipenne*, spec. nov. ♀ stylomere 2 and base of stylomere 1. Scale: 0.2 mm.

Fig. 5. *Fortagonum sinak*, spec. nov. ♂ aedeagus, parameres and genital ring. Scale: 0.5 mm.

tate. Microreticulation very fine, superficial on disk, near apex and base more distinct, isodiametric. Surface glossy.

Elytra. Moderately elongate, dorsal surface markedly convex, lateral borders in middle almost straight. Preapical sinuosity extremely feeble. Widest diameter about in middle. Shoulders wide, obtusely angulate but not dentate, apex dentate with short triangular spine opposite 3<sup>rd</sup> interval. Sutural angle with minute denticle. Striae deep, impunctate, intervals perceptibly convex. Anterior and posterior discal setae absent, apparent median seta situated shortly behind basal third at 2<sup>nd</sup> stria. 19-20 marginal setae and 1 preapical seta at 7<sup>th</sup> stria present, humeral group of marginal series consisting of 6 setae, median and apical pores not much more conspicuous than basal pores, series slightly interrupted in middle. Intervals impunctate. Microreticulation almost wanting. Surface highly glossy, rather iridescent. Wings present.

Lower surface. Prosternal process short, obtusely dentate behind coxae, posteriorly markedly depressed, triangular, ventrolaterally and posterolaterally bordered. Proepisternum smooth. Mese-pisternum coarsely punctate. Metepisternum moderately elongate, c. 1.5× as long as wide at anterior border. Epipleura anteriorly moderately wide, rugose. Abdomen impunctate, though laterally with several fine, elongate wrinkles and shallow impressions. Microreticulation dense, isodiametric, very superficial. ♂ sternum bisetose, in middle excised, ♀ sternum VII unknown.

Legs. Elongate and slender. 4<sup>th</sup> tarsomere medially faintly excised. 5<sup>th</sup> tarsomere asetose beneath. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres of ♂ anterior tarsus biserially squamose.

♂ genitalia. Genital ring rather parallel, at apex slightly asymmetric. Aedeagus stout, rather symmetric, lower surface faintly concave. Apex acute and rather short, with very small, upturned terminal hook. Internal sac in middle at base with a small, elongate, sclerotized plate. Left paramere rather wide, at apex evenly convex.

♀ genitalia. Unknown.

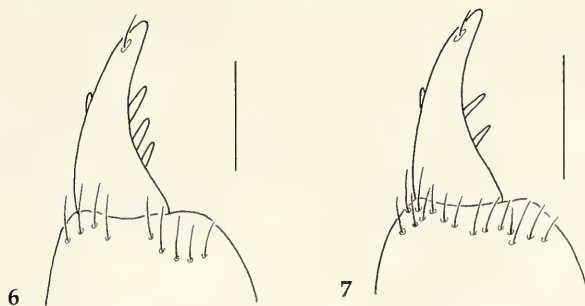
Variation. Unknown.

**Distribution.** Central Irian Jaya. Known only from type locality.

**Collecting circumstances.** Largely unknown. Presumably collected under log in rain forest of median altitude.

**Etymology.** The name refers to the type locality.

**Relationships.** According to shape and structure of aedeagus, and to structure of elytra, this species is perhaps most closely related to *A. denticulatum* Baehr, though the latter species still bears the posterior supraorbital seta.



**Figs 6-7.** ♀ stylomere 2 and base of stylomere 1. 6. *Fortagonum laevigatum*, spec. nov. 7. *F. globulipenne*, spec. nov. Scale: 0.2 mm.

***Fortagonum laevigatum*, spec. nov.**

Figs 3, 6

**Types.** Holotype: ♀, IRIAN JAYA, Panai-Pr., Sinak, Tuput, ca. 2600 m, 13.XII.1995, leg. A. Riedel (ZSM-CBM).

**Diagnosis.** Distinguished by absence of wings, absence of both supraocular setae, both pronotal setae, and all discal setae, very wide pronotum with wide marginal channel and very obtuse posterior angles, rather short, highly convex, markedly egg-shaped elytra, very superficial elytral striae, and absence of an elytral spine.

**Description**

**Measurements.** Length: 10.1 mm; width: 5.0 mm. Ratios. Width/length of pronotum: 1.75; width base/apex of pronotum: 1.43; width pronotum/head: 2.30; width elytra/pronotum: 1.34; length/width of elytra: 1.36.

Wing-and-seta formula: -w - - - - -.

**Colour.** Glossy black. Lateral margins of pronotum very faintly reddish translucent, labrum, mouth parts, tarsi, and base of tibiae dark reddish-piceous, antenna reddish though 1<sup>st</sup>-3<sup>rd</sup> antennomeres infuscate except for base. Lower surface black.

**Head.** Narrow compared with prothorax. Neck rather wide, deeply imbedded in prothorax. Eyes rather small, laterally fairly projecting, orbits distinct, oblique. Clypeal suture distinct. Labrum rectangular, apex feebly concave. Mandibles very elongate, straight, porrect. Antenna moderately elongate, surpassing base of pronotum by about 1½ antennomeres, median antennomeres >3× as long as wide. Both palpi elongate, basal maxillary palpomere thickened. Mentum with an elongate, unidentate tooth. No furrow medially of eyes, though a shallow furrow above antennal base present. Both supraocular setae absent. Clypeus and anterior part of frons with short, shallow, slightly curved furrow, frons evenly convex, absolutely smooth. Microreticulation isodiametric, somewhat superficial. Surface glossy.

**Prothorax.** Very wide, conical in anterior ¾, widest at posterior quarter, laterally straight in anterior ¾, strongly narrowed to apex, posterior quarter convex and suddenly narrowed to base. Disk rather convex, lateral margins widely explanate, separated from disk by a shallow furrow. Anterior angles far projecting, attaining at least middle of eye, narrow though obtuse at apex. Apex regularly and very deeply excised. Basal angles very obtuse, almost rounded off. Base laterally straight, in middle rather produced. Disk convex, both apical and basal sulci absent, base near basal margin with a deep, oblique impression on either side. Median line incomplete, fine, ending far from apex and base. Apex and lateral margins finely though distinctly bordered, base not bordered. Both marginal setae absent. Disk impunctate. Microreticulation very fine, on disk rather superficial, consisting of very fine transverse lines, near apex and base isodiametric and more conspicuous. Surface glossy.

**Elytra.** Comparatively short, markedly egg-shaped, dorsal surface highly convex, lateral borders evenly rounded to apex, though in middle but faintly convex. Preapical sinuosity absent. Widest diameter about in middle. Shoulders very wide, obtusely rounded off, apex separately rounded off, near suture slightly oblique. Striae very shallow, highly superficial, 6<sup>th</sup> and 7<sup>th</sup> striae even weaker. Striae

extremely faintly punctulate, inner four intervals faintly convex. All discal setae absent. 16 marginal setae and 1 preapical seta at 7th stria present, humeral group of marginal series consisting of 5 setae only, median and apical pores much more conspicuous than basal pores, series barely interrupted in middle. Intervals impunctate. Microreticulation extremely fine and very superficial, consisting of transverse meshes and lines. Surface highly glossy, slightly iridescent. Wings absent.

Lower surface. Prosternal process very short, not surpassing procoxae behind, posteriorly markedly depressed, triangular, ventrolaterally and posterolaterally bordered. Proepisternum smooth. Mesepisternum coarsely punctate. Metepisternum short, barely longer than wide at anterior border. Epipleura anteriorly moderately wide, rugose. Abdomen impunctate, though laterally with several fine, elongate wrinkles and shallow impressions. Microreticulation dense, isodiametric, very superficial. ♂ sternum VII unknown, ♀ sternum VII quadrisetose, apex regularly curved.

Legs. Slender and elongate. 4<sup>th</sup> tarsomere medially faintly excised. 5<sup>th</sup> tarsomere asetose beneath. Vestiture of ♂ anterior tarsus unknown.

♂ genitalia. Unknown.

♀ genitalia. Stylomere 2 elongate, little curved, with obtuse apex, with 3 large ventral ensiform setae, a dorsal ensiform seta situated about in middle, and one nematiform seta in a deep furrow fairly close to apex. Apex of stylomere 1 ventrally with c. 9 setae near base of stylomere 2. Lateral plate with 15-18 setae at or near margin.

Variation. Unknown.

**Distribution.** Central Irian Jaya. Known only from type locality.

**Collecting circumstances.** Largely unknown. Presumably collected under log in rain forest of rather elevated altitude.

**Etymology.** The name refers to the smooth surface of the elytra.

**Relationships.** This species seems to be rather unique in shape and structure. Even when the aedeagus is yet unknown, *F. laevigatum* is perhaps more closely related to *F. cycchiceps* Darlington and *F. latum* Baehr than to anyone of the known species.

### *Fortagonum globulipenne*, spec. nov.

Figs 7-9

**Types.** Holotype: ♂, Irian Jaya, Panai-Pr. Kamandoga, Bilai, 1900-2300 m, 3.1.1996, leg. A. Riedel (ZSM-CBM). – Paratypes: 1♀, same data (CBM); 1♂, Irian Jaya, Panai-Pr. Bilogai, 2100-2200 m, 22.-30.12.1995, leg. A. Riedel (CBM).

**Diagnosis.** Distinguished by absence of wings, absence of both supraocular setae, both pronotal setae, and all discal setae, moderately wide, conical pronotum with wide marginal channel and very elongate, straight anterior angles, short, highly convex elytra with deep striae and convex intervals, and absence of an elytral spine.

### Description

Measurements. Length: 9.6-10.0 mm; width: 4.85-5.1 mm. Ratios. Width/length of pronotum: 1.63-1.72; width base/apex of pronotum: 1.61-1.66; width pronotum/head: 2.17-2.18; width elytra/pronotum: 1.29-1.32; length/width of elytra: 1.24-1.28.

Wing-and-seta formula: -w - - - - -.

Colour. Glossy black. Lateral margins of pronotum faintly reddish translucent, labrum, mouth parts, antenna, and tarsi dark reddish-piceous, 1<sup>st</sup>-3<sup>rd</sup> antennomeres more or less infusate. Lower surface black.

Head. Rather narrow compared with prothorax. Neck rather wide, deeply imbedded in prothorax. Eyes rather small, though laterally fairly projecting, orbits short, oblique. Clypeal suture distinct. Labrum rectangular, apex feebly concave. Mandibles rather elongate, straight, though not porrect. Antenna moderately elongate, surpassing base of pronotum by about one antennomere, median antennomeres >3× as long as wide. Both palpi elongate, basal maxillary palpomere thickened. Mentum with an elongate, unidentate tooth. No furrow medially of eyes, though a shallow furrow above



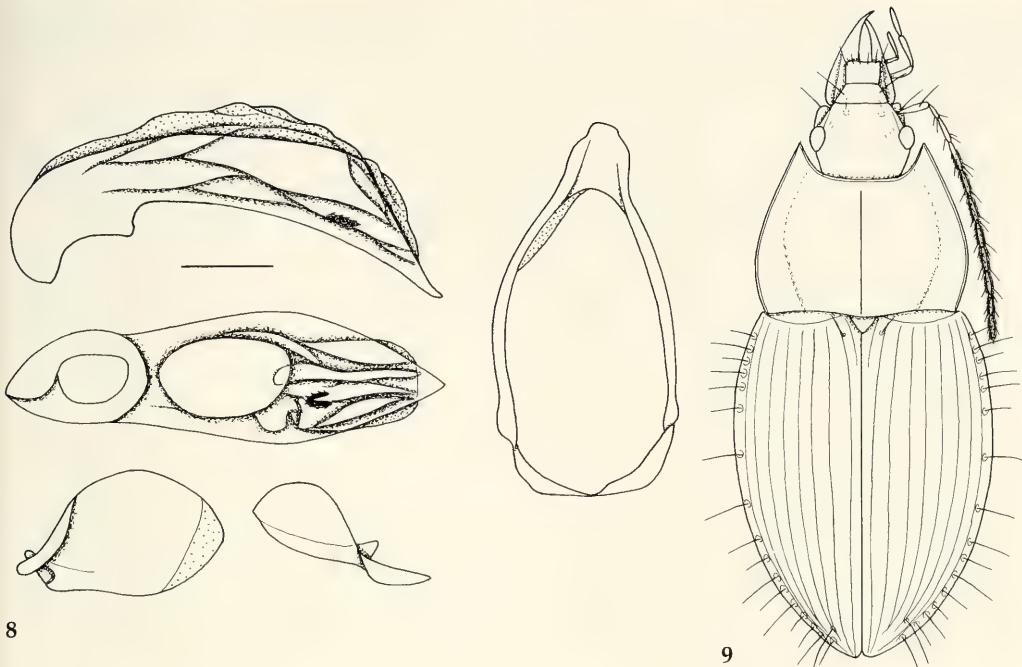


Fig. 8. *Fortagonum globulipenne*, spec. nov. ♂ aedeagus, parameres and genital ring. Scale: 0.5 mm.  
 Fig. 9. *Fortagonum globulipenne*, spec. nov. ♂ holotype. Habitus. Length: 9.6 mm.

antennal base present. Both supraocular setae absent. Clypeus and anterior part of frons with short, shallow, slightly curved furrow, frons evenly convex, absolutely smooth. Microreticulation isodiametric, superficial. Surface glossy.

Prothorax. Wide, conical, widest in posterior third, laterally evenly though feebly convex, only towards apical angles straight. Strongly narrowed to apex, moderately and evenly narrowed to base. Disk evenly convex, lateral margins widely explanate, in posterior half separated from disk by a shallow furrow. Anterior angles narrow, far projecting, acute at apex, attaining at least middle of eye, laterally straight. Apex regularly and very deeply excised. Basal angles rather obtuse, at apex obtusely rounded. Base laterally straight, in middle very faintly produced. Disk convex without anterior and posterior transverse sulci, base near basal margin with a deep, oblique impression on either side. Median line incomplete, fine, ending far from apex and base. Apex and lateral margins finely though distinctly bordered, base laterally not bordered, in middle superficially bordered. Both marginal setae absent. Disk impunctate. Microreticulation very fine, on disk highly superficial, consisting of very fine transverse lines, near apex and base isodiametric and more conspicuous. Surface glossy.

Elytra. Short, and wide, rather egg-shaped, dorsal surface highly convex, lateral borders evenly rounded to apex, though in middle but faintly convex. Preapical sinuosity barely indicated. Widest diameter about in middle. Shoulders very wide, obtusely rounded off, apex separately rounded off, near suture slightly oblique. Striae deep throughout, faintly crenulate, intervals markedly convex. All discal setae absent. 16 marginal setae and 1 preapical seta at 7<sup>th</sup> stria present, humeral group of marginal series consisting of 5 setae only, median and apical pores more conspicuous than basal pores, series slightly interrupted in middle. Intervals impunctate. Microreticulation extremely fine and very superficial, consisting of transverse meshes and lines. Surface highly glossy, slightly iridescent. Wings absent.

Lower surface. Prosternal process short, obtusely dentate behind coxae, posteriorly markedly depressed, triangular, ventrolaterally and posterolaterally bordered. Proepisternum smooth. Mese-pisternum coarsely punctate. Metepisternum short, about as long as wide at anterior border. Epipleura

anteriorly moderately wide, rugose. Abdomen impunctate, though laterally with several fine, elongate wrinkles and shallow impressions. Microreticulation dense, isodiametric, very superficial. ♂ sternum bisetose, apex in middle excised, ♀ sternum VII quadrisetose, apex regularly curved.

Legs. Slender and elongate. 4<sup>th</sup> tarsomere medially faintly excised. 5<sup>th</sup> tarsomere asetose beneath. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres of ♂ anterior tarsus biserially squamose.

♂ genitalia. Genital ring rather parallel, at apex almost symmetric. Aedeagus stout, rather symmetric, lower surface almost straight. Apex acute and short, faintly upturned, but without distinct terminal hook. Internal sac at bottom in middle with a small, horseshoe-shaped, denticulate, sclerotized plate. Left paramere very wide, apex angulate.

♀ genitalia. Stylomere 2 elongate, little curved, with obtuse apex, with 2 moderately large ventral ensiform setae, a dorsal ensiform seta situated about in middle, and one nematiform seta in a deep furrow moderately close to apex. Apex of stylomere 1 ventrally with c. 12 setae near base of stylomere 2. Lateral plate with 15-16 setae at or near margin.

Variation. Very little variation noted.

**Distribution.** Central Irian Jaya. So far known from a very restricted area.

**Collecting circumstances.** Largely unknown. Presumably collected under logs in rain forest of median altitude.

**Etymology.** The name refers to the globose elytra.

**Relationships.** According to body shape and structure, and to structure of aedeagus, this species is perhaps next related to *F. bufo* Darlington, but is distinguished from the latter species by the straight (not concave) lateral border of the apical prothoracic angle, and by the presence of only one sclerotized plate (not two) in the internal sac of the aedeagus.

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### References

- Baehr, M. 1992. On some agonine beetles of the genus *Fortagonum* DARLINGTON from New Guinea (Coleoptera, Carabidae, Agoninae). – Mitt. Münch. Ent. Ges. **82**: 73-81  
– – 1995. New species and new records of the genera *Fortagonum* Darlington and *Collagonum*, gen. nov. from New Guinea (Insecta, Coleoptera, Carabidae, Agoninae). – Spixiana **18**: 15-43  
Darlington, P. J. Jr. 1952. The carabid beetles of New Guinea. Part 2. The Agonini. – Bull. Mus. comp. Zool. **107**: 89-252  
– – 1971. The carabid beetles of New Guinea. Part IV. General considerations; analysis and history of fauna; taxonomic supplement. – Bull. Mus. comp. Zool. **142**: 129-337

### Alphabetical checklist of the species of the genus *Fortagonum*

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|------------------------------------|---|
| <i>acuticolle</i> Baehr, 1995      | <i>fortellum</i> Darlington, 1951       |
| <i>antecessor</i> Darlington, 1971 | <i>globulipenne</i> , spec. nov.        |
| <i>bigenum</i> (Darlington, 1971)  | <i>laevigatum</i> , spec. nov.          |
| <i>bisetosiceps</i> Baehr, 1995    | <i>latum</i> Baehr, 1995                |
| <i>bufo</i> Darlington, 1952       | <i>okapa</i> Darlington, 1971           |
| <i>curtum</i> Baehr, 1992          | <i>oodinum</i> Darlington, 1971         |
| <i>cychriceps</i> Darlington, 1952 | <i>sinak</i> , spec. nov.               |
| <i>denticulatum</i> Baehr, 1995    | <i>spinipenne</i> , spec. nov.          |
| <i>depressum</i> Baehr, 1995       | <i>spinosum</i> Baehr, 1995             |
| <i>forceps</i> Darlington, 1952    | <i>subconicollae</i> (Darlington, 1971) |
| <i>formiceps</i> Darlington, 1971  | <i>unipunctatum</i> Baehr, 1995         |